## **EAST Search History**

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	"10583121"	US-PGPUB; USPAT	OR	ON	2009/11/16 16:58
S2	2	(("6359211") or ("20040067613")).PN.	US-PGPUB; USPAT	OR	OFF	2010/02/25 16:45
S3	1	("6291763").PN.	US-PGPUB; USPAT	OR	OFF	2010/02/26 09:24
S4	5695	((solar or photovoltaic) with cell) and electrolyt\$2	US-PGPUB; USPAT	OR	ON	2010/02/26 09:42
S5	1649	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier	US-PGPUB; USPAT	OR	ON	2010/02/26 09:43
S6	524	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier and @py<"2004"	US-PGPUB; USPAT	OR	ON	2010/02/26 09:43
S7	466	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier and @py<"2004" and (deposit \$3 or coating or plating)	US-PGPUB; USPAT	OR	ON	2010/02/26 09:43
S8	125	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier and @py<"2004" and (deposit \$3 or coating or plating) and dye	US-PGPUB; USPAT	OR		2010/02/26 09:44
S9	17	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier and @py<"2004" and (electrolytic with (deposit \$3 or coating or plating)) and dye	US-PGPUB; USPAT	OR	ON	2010/02/26 09:46
S10	19	((solar or photovoltaic) with cell) and electrolyt\$2 and barrier and @py<*2004" and (electrolytic with (deposit \$3 or coating or plating or treat\$4 or processing)) and dye	US-PGPUB; USPAT	OR	ON	2010/02/26 09:46
S11	7151	@py<"2004" and "titanium dioxide" same glass	US-PGPUB; USPAT	OR	ON	2010/02/26 09:54

S12	2548	@py<"2004" and "titanium dioxide" same glass and dye	US-PGPUB; USPAT	OR	ON	2010/02/26 09:54
S13	57	@py<"2004" and "titanium dioxide" same glass and dye and ("solar cell" or "photovoltaic cell")	US-PGPUB; USPAT	OR	ON	2010/02/26 09:56
S14	53	@py<"2004" and "titanium dioxide" same substrate and dye and ("solar cell" or "photovoltaic cell")	US-PGPUB; USPAT	OR	ON	2010/02/26 09:58
S15	73	@py<"2004" and ("titanium dioxide" same (substrate or glass)) and dye and ("solar cell" or "photovoltaic cell")	US-PGPUB; USPAT	OR	ON	2010/02/26 09:58
S16	130	@py<"2004" and ("titanium dioxide" same (substrate or glass)) and dye and ("solar cell" or photovoltaic or photoelectric)	US-PGPUB; USPAT	OR	ON	2010/02/26 10:45
S17	4	@py<"2004" and ("titanium dioxide" same (method near3 (making or manufactur\$3))) and dye and ("solar cell" or photovoltaic or photoelectric)	US-PGPUB; USPAT	OR	ON	2010/02/26 10:46
S18	91	@py<"2004" and ("titanium dioxide" and (method near3 (making or manufactur\$3))) and dye and ("solar cell" or photovoltaic or photoelectric)	US-PGPUB; USPAT	OR	ON	2010/02/26 10:46
S19	25	@yve."2004" and ('titanium dioxide' and ('titanium dioxide' and (method near3 (making or manufactur\$3))) and dye and ('solar cell' or photovoltaic or photoslectric) and (electroly\$3 with (treatment or process\$3 or condition\$3))	US-PGPUB; USPAT	OR	ON	2010/02/26 10:48

S20	5	@py<"2004" and (international disasterial	US-PGPUB; USPAT	OR		2010/02/26 10:50
S21	670	136/263.ccls.	US-PGPUB; USPAT	OR	ON	2010/02/ <b>2</b> 6 10:53
S22	4609	yoshikawa.in.	US-PGPUB; USPAT	OR	ON	2010/02/26 10:57
S23	20	yoshikawa.in. and "136". das.	US-PGPUB; USPAT	OR	ON	2010/02/26 10:57
S24	12	yoshikawa.in. and "136". das. and dye	US-PGPUB; USPAT	OR	ON	2010/02/26 10:57
S25	89	@py<"2004" and ("titanium dioxide" same pulse)	US-PGPUB; USPAT	OR	ON	2010/02/26 13:13
S26	27	@py<"2004" and ("titanium dioxide" same (pulse with (plat\$3 or deposit\$3 or coat\$3 or electrodeposit\$3 or electrocoat\$3 or electroplat \$3)))	US-PGPUB; USPAT	OR	ON	2010/02/26 13:14
S27	146	@py<"2004" and ((reverse near1 pulse) with (plat\$3 or deposit\$3 or coat\$3 or electrodeposit\$3 or electrocoat\$3 or electroplat \$3))	US-PGPUB; USPAT	OR	ON	2010/02/26 13:18
S28	81	@py<"2004" and ((reverse near1 pulse) with (plat\$3 or deposit\$3 or coat\$3 or electrocat\$3 or electrocplat \$3)) and ("204".clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2010/02/26 13:18
\$29	111	@py<"2004" and ((reverse near1 pulse) with (plat\$3 or deposit\$3 or coat\$3 or electrodeposit\$3 or electroplat \$31) and ("204".das. or "205".das.) and "metal oxide"	US-PGPUB; USPAT	OR	OX	2010/02/26 13:19

S30	484	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive)	US-PGPUB; USPAT	OR	ON	2010/02/26 13:25
S31	458	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrodeposit\$3 or electro-deposit\$3 or electro-deposit\$3 or electro-deposit\$3 or (electro-lytic-with (treat\$4 or condition\$\$3 or process \$3))	US-PGPUB; USPAT	OR	ON	2010/02/26 13:27
S32	358	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrodeposits3 or plats3 or electro-deposits3 or electrostdeposits3 or electrostdeposits3 or (electro	US-PGPUB; USPAT	OR	ON	2010/02/26 13:27
S33	87	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrodeposit\$3 or electroplat\$3 or coat\$3 or plat\$3 or electro-deposit\$3 or electro\$1deposit\$3 or condition\$3 or process \$3))) and dye and @py<"2004"	US-PGPUB; USPAT	OR	ON	2010/02/26 13:27

\$34	16	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrodeposits3 or electro- deposits3 or electro- st deposits3 or clectrolytic with (treat\$4 or condition \$3 or process\$3))) and dye and @pys "2004"	US-PGPUB; USPAT	OR	ON	2010/02/26 13:32
S35	9	((IGOR) near2 (SKRYABIN)).INV.	US-PGPUB; USPAT	OR	ON	2010/02/26 14:22
S36	5	((GRAEME) near2 (EVANS)).INV.	US-PGPUB; USPAT	OR	ON	2010/02/26 14:22
S37	16	((IGOR) near2 (SKRYABIN)).INV.	EPO; JPO; DERWENT	OR	ON	2010/02/26 14:22
S38	6	((GRAEME) near2 (EVANS)).INV.	EPO; JPO; DERWENT	OR	ON	2010/02/26 14:22
S39	62	electrodeposit\$3 and ("constant current" same "constant voltage" same (switch\$2 or change))	US-PGPUB; USPAT	OR	ON	2010/02/26 15:30
S40	19	electrodeposit\$3 and ("constant current" same "constant voltage" same (switch\$2 or change)) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2010/02/26 15:30
S41	22	(electrodeposit\$3 or electro \$1 deposit\$3 or electro- deposit\$3 or electro- lectro\$1 plat\$3 or electro\$1 plat\$3 and ("constant current" same "constant voltage" same (switch\$2 or change)) and @py<"2004" and ("204". idas. or "205". das.)	US-PGPUB; USPAT	OR	ON	2010/02/26 15:31
S42	18	"5858199"	US-PGPUB; USPAT	OR	ON	2010/02/26 15:39
S43	25	(electrodeposit\$3 or electro \$1 deposit\$3 or electro-ledposit\$3 or electro-plat\$3 or electro-plat\$3 or electro-plat\$3 or (electrolytic\$4 near1 (treat \$4 or deposit\$3))) and ("constant current" same "constant voltage" same (switch\$2 or change)) and @py="2004" and ("204". clas. or "205".das.)	US-PGPUB; USPAT	OR	ON	2010/05/06 12:42

S44	13734	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electroplats3 or electros1plats3 or electro-plats3 or (electrolyics4 near1 (treat \$4 or deposits3))) and @py<"2005" and ("204", clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2010/05/06 12:43
S45	234	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electroplats3 or electros1 plats3 or electro-plats3 or (electrolytics4 near1 (treat \$4 or deposits3))) and @py_*(2005* and ("204", clas. or "205" clas.) and ("solar cell" or photovoltaic)	US-PGPUB; USPAT	OR	ON	2010/05/06 12:43
S46	5	(electrodeposit\$3 or electro \$1 deposit\$3 or electro- deposit\$3 or electro- plat\$3 or electro-plat\$3 or electro-plat\$3 or (electro-plat\$3 or (electrolytic\$4 near1 (treat \$4 or deposit\$3))) and @py="2005" and ("204". clas. or "205" clas.) and (dye with sensitized)	US-PGPUB; USPAT	OR	ON	2010/05/06 12:46
S47	124	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electro-plats3 or electro-plats3 or electro-plats3 or (electrolytics4 near1 (treat \$4 or deposits3))) and @py<"2005" and (dye with sensitized)	US-PGPUB; USPAT	OR	ON	2010/05/06 12:46
S48	1	"20020108649"	US-PGPUB; USPAT	OR	ON	2010/05/06 13:20
S49	3	(electrodeposit\$3 or electro \$1deposit\$3 or electroplat\$3 or electroplat\$3 or electro-plat\$3 or electro-plat\$3 or (electrolytic\$4 near1 (treat \$4 or deposit\$3))) and @py<"2005" and (dye with sensitized)	EPO; JPO; DERWENT	OR	ON	2010/05/06 14:10
S50	0	"2006162765"	US-PGPUB; USPAT	OR	ON	2010/05/06 14:13
S51	1	"20060162765"	US-PGPUB; USPAT	OR	ON	2010/05/06 14:13

S52	173	(electrodeposit\$3 or electro \$1deposit\$3 or electro- deposit\$3 or electro- plat\$3 or electro-plat\$3 or electro-plat\$3 or (electro-plat\$3 or (electro-plat\$4 near1 (treat \$4 or deposit\$3))) and @py<"2007" and (dye with sensitized)	US-PGPUB; USPAT	OR		2010/05/06 14:18
S53	49	S52 not S47	US-PGPUB; USPAT	OR	ON	2010/05/06 14:18
S54	4717	(electrodeposit\$3 or electro \$1 deposit\$3 or electro- deposit\$3 or electro-plat\$3 or electro\$1plat\$3 or electro*plat\$3 or (electro*plat\$4 near1 (treat \$4 or deposit\$3 or plat \$3))) and (metal with oxide) and pulse	US-PGPUB; USPAT	OR	ON	2010/05/06 16:06
S55	1143	(electrodeposits3 or electro \$1 deposits3 or electroplats3 or electroplats3 or electro-\$1 plats3 or electro-\$1 plats3 or (electrolytic\$4 near1 (treat \$4 or deposit\$3 or plat \$3))) and (metal with oxide) and (pulse with (plat \$3 or deposit\$4))	US-PGPUB; USPAT	OR	S	2010/05/06 16:07
S56	444	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electroplats3 or electros1plats3 or electro-plats3 or (electro-plats3 or plat \$4 or deposits3 or plat \$3))) and (metal with oxide) and (pulse with (plat \$3 or deposits4)) and @py< 2005*	US-PGPUB; USPAT	OR	ON	2010/05/06 16:07
S57	110	(electrodeposit\$3 or electro \$1 deposit\$3 or electro- deposit\$3 or electro- deposit\$3 or electro-plat\$3 or electro-plat\$3 or (electro-plat\$3 or (electro-plat\$3 or plat \$4 or deposit\$3 or plat \$3))) same (metal with oxide) and (pulse with (plat \$5 or deposit\$4)) and @py<*2005*	US-PGPUB; USPAT	OR	S	2010/05/06 16:07

S58	32	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electro-plats3 or electro-plats3 or electro-plats3 or (electrolytics4 near1 (treat \$4 or deposits3 or plat \$3))) same (metal with oxide) and (pulse with (plat \$3 or deposits4)) and @py="2005" and reverse	US-PGPUB; USPAT	OR	ON	2010/05/06 16:08
S59	174	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electroplats3 or electros/1plats3 or electro-plats3 or (electrolytics4 near1 (treat \$4 or deposits3 or plat \$3))) same (metal with oxide) and ("constant current") and @py< "2005"	US-PGPUB; USPAT	OR	S	2010/05/10 14:41
S60	4	(electrodeposits3 or electro \$1 deposits3 or electro- deposits3 or electro-plats3 or electros1 plats3 or electro-plats3 or (electrolytics4 near1 (treat \$4 or deposits3 or plat \$3))) same (metal with oxide) and ("constant current") and @py="2005" and "voltage limit"	US-PGPUB; USPAT	OR	ON	2010/05/10 14:41
S61	90	205/106.cds. and @py<"2004"	US-PGPUB; USPAT	OR	ON	2010/05/10 16:08
S62	314737	205/106.cds. and @py<"2004" and galvanostatic or ((constant or controlled) with current)	US-PGPUB; USPAT	OR	ON	2010/05/10 16:09
S63	29	205/106.cds. and @py<"2004" and (galvanostatic or ((constant or controlled) with current))	US-PGPUB; USPAT	OR	ON	2010/05/10 16:09
S64	13	("2982763"   "3022233"   "3219561"   "3254010"   "3983012"   "RE25630"). PN. OR ("4142947").URPN.	US-PGPUB; USPAT; USOOR	OR	ON	2010/05/11 10:23
S65	166	(electrolytic or plating or electroplat\$3) with barrier and photovoltaic	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:19
S66	75	(electrolytic or plating or electroplat\$3) with barrier and photovoltaic and @py<"2005"	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:19

S67	19	(electrolytic or plating or electroplat\$3) with barrier and photovoltaic and @py<"2005" and (Yttria or yttrium or y)	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:20
S68	61	("3110620"   "3186874"   "3316386"   "3436625"   "3446936"   "3447234"   "3449032"   "3508126"   "3551335"   "3565866"   "3612859"   "3636916"   "3647197"   "3654109"   "3716406"   "3716424"   "3739070"   "3914556"   "3978510"   "4005442"   "4024376"   "4036167"   "4046565"   "4059067"   "401341"   "4251287"   "4313254"), PN. OR ("FR31988"), URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/06 09:25
S69	5	(("3186874") or ("3447234") or ("3565686") or ("4086101") or ("4101341")).PN.	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:28
<b>S7</b> 0	0	S69 and dye	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:33
S71	0	(electrolytic or plating or electroplat\$3 or electrodeposit\$3) with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2005" and dye	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:42
S72	1	(electrolytic or plating or electroplat\$3 or electrodeposit\$3) with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2006" and dye	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:42
S73	0	(electrolytic or plating or electroplat\$3 or electrodeposit\$3) with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and (@py<"2006" and dye	EPO; JPO; DEPWENT	OR	OFF	2010/12/06 09:47

S74	0	(electrolytic) with treatment with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py< "2006" and dye	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:48
S75	0	(electrolytic) with treatment with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2006"	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:48
S76	0	(electrolytic) with treatment with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2007"	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:48
S77	0	(electrolytic\$4) with treatment with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2007"	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:48
S78	0	(electrolytic\$4) with treat \$4 with (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2007"	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:49
S79	0	(electrolytic\$4) with (treat \$4) same (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2007"	EPO; JPO; DERWENT	OR	OFF	2010/12/06 09:49
S80	2	(electrolytic\$4) with (treat \$4) same (Yttria or yttrium or y) and (photovoltaic or "solar cell" or photoelectric) and @py<"2007"	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:49
S81	4	dyesol.as.	US-PGPUB; USPAT	OR	OFF	2010/12/06 09:51
S82	3	(electrolytic\$4) with (treat \$4) same ("titanium dioxide" or "nanoparticulate layer" or "nano-particulate layer" or "ito.sub.2") and (photovoltaic or "solar cell" or photoelectric) and (@pv="2007"	US-PGPUB; USPAT	OR	OFF	2010/12/06

S83	10	(electrolytic\$4) with (treat \$4 or dop\$3 or process\$3 or conver\$5) same ("titanium dioxide" or "nanoparticulate layer" or "nano-particulate layer" or "tio sub 2") and (photovoltaic or "solar cell" or photoelectric) and (@py<"2007"	US-PGPUB, USPAT	OR	OFF	2010/12/06 10:18
S84	10	(electrolytic\$4) with (treat \$4 or dop\$3 or proces\$5 or design\$3 or engineer\$3) same ("titanium dioxide" or "nanoparticulate layer" or "nano-particulate layer" or "itio.sub.2") and (photovoltaic or "solar cell" or photoelectric) and (ppy<"2007"	US-PGPUB; USPAT	OR	OFF	2010/12/06 10:18
S85	15	(electrolytic\$4) with (treat \$4 or dop\$3 or proces\$5 or design\$3 or engineer\$3) same ("titanium dioxide" or "nanoparticulate layer" or "nano-particulate layer" or "tio.sub.2") and (photovoltaic or "solar cell" or photoelectric) and (@py<"2009"	US-PGPUB; USPAT	OR	OFF	2010/12/06 10:19
S86	270	(photovoltaic or photoelectric or "solar cell") and (dye same electrolytic\$5)	US-PGPUB; USPAT	OR	ON	2010/12/06 11:49
S87	62	(photovoltaic or photoelectric or "solar cell") and (dye same electrolytic\$5) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/06 11:50
S88	1	(photovoltaic or photoelectric or "solar cell") and (electrody\$4) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/06 13:05
S89	1	(photovoltaic or photoelectric or "solar cell") and (electro\$1dy\$4) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/06 13:05
S90	302	(photovoltaic or photoelectric or "solar cell") same (dye with (sensitiz\$3 or absorb\$4)) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/06 13:06

S91	259	(photovoltaic or photoelectric or "solar cell") same (dye with (sensitiz\$3 or absorb\$4)) and @py<"2005" and electrode	US-PGPUB; USPAT	OR	ON	2010/12/06 13:07
S92	89	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye	US-PGPUB; USPAT	OR	ON	2010/12/06 13:19
S93	35	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye and ("204".clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2010/12/06 13:19
S94	51	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye and ("204".clas. or "205".clas. or "136".clas.)	US-PGPUB; USPAT	OR	ON	2010/12/06 13:20
S95	27	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye and ("204" clas. or "205".clas. or "136".clas.) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/06 13:20
S96	100	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye	EPO; JPO; DERWENT	OR	MON	2010/12/06 13:20
S97	10	electrolytic\$4 with (dying or dyeing or absorption or absorbing or treat\$4) with dye and (photoelectric or photovoltaic or "solar cell")	EPO; JPO; DERWENT	OR	ON	2010/12/06 13:21
S98	213	(constant near2 current) same (voltage with (limit or maximum)) and ("204". clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2010/12/16 21:37
S99	149	(constant near2 current) same (voltage with (limit or maximum)) and ("204". clas. or "205".clas.) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2010/12/16 21:38
S100	42	(constant near2 current) same (voltage with (limit or maximum)) and ("204" clas or "205" clas) and @py<"2005" and (plating or electroplat\$3 or electrodeposit\$3)	US-PGPUB; USPAT	OR	ON	2010/12/16 21:41

S101	4	"yttrium salt" and ("204". clas. or "205".clas.) and (plating or electroplat\$3 or electrodeposit\$3)	US-PGPUB; USPAT	OR	OFF	2010/12/17 10:41
S102	17	"yttrium carbonate" and ("204".clas. or "205".clas.) and (plating or electroplat \$3 or electrodeposit\$3)	US-PGPUB; USPAT	OR	OFF	2010/12/17 10:51
S103	5	"yttrium carbonate" same (plating or electroplat\$3 or electrodeposit\$3) and ("204".clas. or "205".clas.)	US-PGPUB; USPAT	OR	OFF	2010/12/17 10:52
S104	8902	(electroly\$4 or electroplat \$3 or plat\$3 or electroform \$3 or electrodeposit\$3) with "barrier layer"	US-PGPUB; USPAT	OR	OFF	2010/12/17 12:33
S105	306	(electroly\$4 or electroplat \$3 or plat\$3 or electroform \$3 or electrodeposit\$3) with "barrier layer" and (photovoltaic or "solar cell" or photoelectric)	US-PGPUB; USPAT	OR	OFF	2010/12/17 12:34
S106	165	(electroly\$4 or electroplat \$3 or plat\$3 or electroform \$3 or electrodeposis(\$3) with "barrier layer" and (photovoltaic or "solar cell" or photoelectric) and @py<"2006"	US-PGPUB; USPAT	OR	OFF	2010/12/17 12:34
S107	62	(electroly\$4 or electroplat \$3 or plat\$3 or electroform \$3 or electrodeposit\$3) with "barrier layer" and (photovoltaic or "solar cell" or photoelectric) and @px-"2006" and (yttrium or yttria or y or "rare earth metal")	US-PGPUB; USPAT	OR	OFF	2010/12/18 08:44
S108	9	"3,186,874"	US-PGPUB; USPAT	OR	OFF	2010/12/18 09:08
S109	167	("CAdmium sulfide" or CdS) same dye and (photovoltaic or photoelectric or "solar cell" or "136".clas.)	US-PGPUB; USPAT	OR	OFF	2010/12/18 09:14
S110	53	("CAdmium sulfide" or CdS) same dye and (photovoltaic or photoelectric or "solar cell" or "136".das.) and @py<"2005"	US-PGPUB; USPAT	OR	OFF	2010/12/18 09:14
S111	46146	intercalat\$3	US-PGPUB; USPAT	OR	ON	2011/04/29 15:18

S112	3287	intercalat\$3 and electrolytic	US-PGPUB; USPAT	OR	ON	2011/04/29 15:18
S113	386	intercalat\$3 and electrolytic and ("204". clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/04/29 15:18
S114	241	intercalat\$3 and electrolytic and ("204". clas. or "205".clas.) and @py<"2005"	US-PGPUB; USP <b>A</b> T	OR	ON	2011/04/29 15:18
S115	40	intercalat\$3 and electrolytic and ("204". clas. or "205".clas.) and @py<"2005" and yttrium	US-PGPUB; USPAT	OR	ON	2011/04/29 15:19
S116	10	intercalat\$3 same electrolytic and ("204". clas. or "205".clas.) and @py<"2005" and yttrium	US-PGPUB; USPAT	OR	ON	2011/04/29 15:19
S117	87	136/263.cds. and ("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrodeposit\$3 or electroplat\$3 or electro-deposit\$3 or electro\$1 deposit\$3 or electro\$1 deposit\$3 or	US-PGPUB; USPAT	OR	ON	2011/04/29 15:26
S118	40395	("titanium dioxide" or  "metal oxide" or  "photoactive layer" or  semicondutor or  photosensitive) and  (electrodeposit\$3 or  electroplat\$3 or electro-deposit\$3 or  plat\$3 or electro-fdeposit\$3 or  electro\$1deposit\$3 or  electro\$1deposit\$3 or  electrosty or  process \$3 or interalt\$3)) and  dye and  @py< 2004"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:27
S119	931	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive) and (electrolytic with (treat\$4 or condition\$3 or process \$5 or intercalat\$3)) and dye and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:27

S120	931	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "ti2.sub. o") and (electrolytic with (treats4 or conditions3 or process\$3 or intercalat\$3)) and dye and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:28
S121	931	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or johotosenstive or "ti. sub.2c") and (electrolytic with (treat\$4 or condition \$3 or process\$3 or intercalat\$3)) and dye and @py<"2004"	US-PGPUB; USPAT	OR	OZ	2011/04/29 15:28
S122	973	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2") and (electrolytic with (treats4 or condition \$3 or process\$3 or intercalat\$3)) and dye and @py<"2004"	US-PGPUB; USPAT	ÖR	ON	2011/04/29 15:29
S123	125	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2") same (electrolytic with (treats4 or condition \$3 or process\$3 or intercalat\$3)) and dye and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:29
S124	145	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub 2") same (electrolytic with (treats4 or condition \$3 or process\$3 or intercalat\$3)) and dye and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:29
S125	144	S124 not S117	US-PGPUB; USPAT	OR	ON	2011/04/29 15:30
S126	0	S124 not S117 and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:32

S127	81	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub 2") same (electrolytic near3 (treat\$4 or condition \$3 or process\$3 or intercalat\$3)) and dye and @py<"2005"	US-PGPUB; USPAT	OR	SON	2011/04/29 15:32
S128	456	("titanium dioxide" or "metal oxide" or "photoacilve layer" or semicondutor or photosensitive or "tio. sub.2") same (electrolytic near3 (treat&4 or condition \$3 or process\$3 or intercalat\$3)) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:33
S129		("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2") same (electrolytic near3 (treat\$4 or condition \$3 or process\$3 or intercalat\$3)) and @py<"2005" and "136". das.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:33
S130	1	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2" or nanoparticulate) same (electrolytic near3 (treat\$4 or condition\$3 or process\$3 or intercalat\$3)) and @py<"2005" and "136".das.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:34
S131	1	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub 2" or nanoparticulate or nano\$1 particulate) same (electrolytic near3 (treat\$4 or condition\$3 or process\$3 or intercalat\$3)) and @pyz="2005" and "136" clas.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:34

S132	1	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2" or nanoparticulate or nano\$ particulate or nano particulate) (electrolytic neard (treat\$4 or condition\$3 or process \$3 or intercalat\$3)) and @py="2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:35
S133	0	intercalat\$3 same ("titanium dioxide" or "tio. sub.2") and ("204".clas. or "205".clas.) and @py<"2005" and yttrium	US-PGPUB; USPAT	OR	ON	2011/04/29 15:35
S134	3	intercalat\$3 same ("titanium dioxide" or "tio. sub.2") and ("204".clas. or "205".clas.) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:35
S135	0	intercalat\$3 same ("titanium dioxide" or "tio. sub.2") and "136".clas. and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:36
S136	30	intercalat\$3 and "136". clas. and @py< "2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:36
S137	12	intercalat\$3 and "136". clas. and @py< "2005" and (yttrium or Y or yttria)	US-PGPUB; USPAT	OR	ON	2011/04/29 15:36
S138	10	intercalat\$3 same (electrolytic or electrochemical) and ("204".clas. or "205".clas.) and @py<"2005" and yttrium	US-PGPUB; USPAT	OR	ON	2011/04/29 15:37
S139	19	intercalat\$3 near3 (electrolytic or electrochemical) and @py<"2005" and yttrium	US-PGPUB; USPAT	OR	ON	2011/04/29 15:38
S140	11	intercalat\$3 near3 (electrolytic or electrochemical) same (yttrium or Y or yttria) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/04/29 15:38
S141	2	intercalat\$3 near3 (electrolytic or electrochemical) and @py<"2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/04/29 15:39

S142	30	intercalat\$3 and @py<"2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/05/03 11:18
S143	46171	intercalat\$3 or ((ion\$3 or metal or element) with "into the surface") and @py<"2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/05/03 111:22
S144	30	(intercalat\$3 or ((ion\$3 or metal or element) with "into the surface")) and @py<"2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/05/03 11:22
S145	79	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) near3 surface)) and @py<"2005" and "136". clas.	US-PGPUB; USPAT	OR	ON	2011/05/03
S146	41	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) near3 surface)) and @py<"2005" and "136" clas. and ((solar or photovoltaic) with (device or cell or apparatus or system))	US-PGPUB; USPAT	OR	ON	2011/05/03 11:24
S147	41	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insent\$3) near3 surface)) and (@py<*2005* and "136". clas. and ((solar or photovoltaic or optoelectronic) with ((device or cell or apparatus or system))	US-PGPUB; USPAT	OR	ON	2011/05/03 11:25
S148	23	S146 not S144	US-PGPUB; USPAT	OR	ON	2011/05/03 11:26
S149	130	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) near3 surface)) and "136". clas. and ((solar or photovoltaic) with (device or cell or apparatus or system))	US-PGPUB; USPAT	OR	ON	2011/05/03 11:31
S150	89	S149 not S146	US-PGPUB; USPAT	OR	ON	2011/05/03 11:31

S151	1691	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) near3 surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system))	US-PGPUB; USPAT	OR	ON	2011/05/03 11:33
S152	120	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) near3 surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system)) and (dye with solar with cell)	US-PGPUB; USPAT	OR	ON	2011/05/03 11:34
S153	187	(intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system)) and (dye with solar with cell)	US-PGPUB; USPAT	OR	ON	2011/05/03 11:35
S154	183	"5350644"	US-PGPUB; USPAT	OR	ON	2011/05/03 12:09
S155	16	intercalat\$3 near3 (electrolytic or electrochemical) with (Boron or yttrium or B or Y or divalent or trivalent) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 12:19
S156	69	("4117210"   "4927721"). PN. OR ("5350644").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2011/05/03 13:03
S157	56	(intercalat\$3 or dop\$3) near3 (electrolytic or electrochemical) with (Boron or yttrium or B or Y or divalent or trivalent) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 13:17
S158	114	(intercalat\$3 or dop\$3) near3 (electrolytic or electrochemical) with (Boron or yttrium or B or Y or divalent or trivalent) and @py<"2005" and ("204".das or "205" das.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:17
S159	156	(intercalat\$3 or dop\$3) near3 (electrolytic or electrochemical) and @py<"2005" and ("204". clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:18

S160	14	(intercalat\$3 or dop\$3 or chemisorb\$4) near3 (electrolytic or electrochemical) with (Boron or yttrium or B or Y or divalent or trivalent) and @py="2005" and ("204".das. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:33
S161	16	(intercalat\$3 or dop\$3 or chemisorb\$4 or absorb\$4) near3 (electrolytic or electrochemical) with (Boron or yttrium or B or Y or divalent or trivalent) and @py<"2005" and ("204".clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:34
S162	103	(chemisorb\$4 or absorb\$4) near3 (electrolytic or electrochemical) and @py<"2005" and ("204". clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:35
S163	9	(chemisorb\$4 or absorb\$4) near3 (electrolytic or electrochemical) and @py<"2005" and ("204". clas. or "205" clas), and (("metal oxide" or semiconductor or nano \$1particulate or nanoparticulate or "titanium diode" or "tito.sub.2") near3 (electrode or layer))	US-PGPUB; USPAT	OR	ON	2011/05/03 13:37
S164	9	(chemisorb\$4 or absorb\$4) near3 (electrolytic or electrochemical) and @py<"2005" and ("204". clas. or "205" clas. or "136" clas. on d'("metal oxide" or semiconductor or nano\$f particulate or "titanium diode" or "tio.sub.2") near3 (electrode or layer))	US-PGPUB; USPAT	OR	ON	2011/05/03 13:37
S165		(chemisorb\$4 or absorb\$4) near3 (electrolytic or electrochemical) and @py<"2005" and (("metal oxide" or semiconductor or nano\$particulate or nano- particulate or "titanium dloxide" or "tio.sub.2") near3 (electrode or layer))	US-PGPUB; USPAT	OR	ON	2011/05/03 13:37

S166	0	(chemisorbs4) near3 (electrolytic or electrochemical) and @py @py 2005* and (("metal oxide" or semiconductor or nanos* particulate or nanoparticulate or nanoparticulate or "titanium dioxide" or "tito.sub.2") near3 (electrode or layer))	US-PGPUB; USPAT	OR	O	2011/05/03 13:39
S167	0	(chemisorb\$4) near3 (electrolytic or electrochemical) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 13:40
S168	714	(chemisorb\$4 or dop\$3) near3 (electrolytic or electrochemical) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 13:40
S169	171	(dop\$3) near3 (electrolytic or electrochemical) and @py<"2005" and (("metal oxide" or semiconductor or nano\$1particulate or nanoparticulate or "titanium dioxide" or "tito.sub.2") near3 (electrode or layer))	US-PGPUB; USPAT	OR	ON	2011/05/03 13:41
S170	26	(dop\$3) near3 (electrolytic or electrochemical) and (@py < "2005" and (("metal oxide" or semiconductor or nano\$1particulate or inanoparticulate or "itianium dioxide" or "itio sub.2") near3 (electrode or layer)) and ("204" clas. or "205". clas. or "136" clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 13:41
S182	98851	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system))	US-PGPUB; USPAT	OR	ON	2011/05/03 14:26
S183	10037	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system)) and dye	US-PGPUB; USPAT	OR	ON	2011/05/03 14:26
S184	490	[((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system)) and (dye with (eslectrolytic\$5 or electrochemic\$5))	US-PGPUB; USPAT	OR	ON	2011/05/03 14:27

S185	108	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system)) and (dye with (electrolytic\$5 or electrochemic\$5)) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 14:27
S186	48	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system)) and (dye with (electrolytic\$5 or electrochemic\$5) and @py="2005" and (dye near3 (two or multiple or several or subsequent or (three or couple))	US-PGPUB; USPAT	OR	<u> </u>	2011/05/03 14:28
S187	30	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and (dye with (electrolytic\$5 or electrochemic\$5) and @py="2005" and (dye near3 (two or multiple or several or subsequent or three or couple))	US-PGPUB; USPAT	OR	OX	2011/05/03 14:29
S188	4	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with (by) and (dy\$4 near2 (electrolytic\$5 or electrochemic\$5)) and (dype "2005" and (dye near3 (two or multiple or several or subsequent or three or couple)	US-PGPUB; USPAT	OR	ON	2011/05/03 14:29
S189	98	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and ("204".clas. or "205".clas.)	US-PGPUB; USPAT	OR	ON	2011/05/03 14:36
S190	11	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and ("204".clas. or "205".clas.) and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/03 14:36
S191	367	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and (barrier near2 (layer or coating or film))	US-PGPUB; USPAT	OR	ON	2011/05/04 11:09

S192	56	((solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and (barrier near2 (layer or coating or film)) same (electrolytic\$4 or electrochemical\$4 or electroplating or plating)	US-PGPUB; USPAT	OR	200 200 200 200 200 200 200 200 200 200	2011/05/04 11:09
S193	14	((Solar or photovoltaic or optoelectronic) with (device or cell or apparatus or system) with dye) and (barrier near? (layer or coating or film)) same (electrolytics4 or electropating or plating) and @pye-2006*	US-PGPUB; USPAT	OR	ON	2011/05/04 11:10
S194	1838	(dye with sensitized with "solar cell")	US-PGPUB; USPAT	OR	ON	2011/05/05 08:28
S195	55	(dye with sensitized with "solar cell") and (absorb\$4 with (UV or ultraviolet or ultra-violet) and ("visual light" or photon) and (infrared or IF))	US-PGPUB; USPAT	OR	ON	2011/05/05 08:29
S196	7	(dye with sensitized with "solar cell") and (absorb\$4 with (UV or ultraviolet or ultra-violet) and ("visual light" or photon) and (infrared or IR)) and @pye "2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:29
S197	1	(dye with sensitized with "solar cell") and (absorb\$4 with (UV or ultraviolet or ultra-violet) same ("visual light" or photon) same (infrared or IR)) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:30
S198	1	((dye with sensitized with "solar cell") or (photosensitizer with "solar cell")) and (absort54 with (UV or ultraviolet or ultraviolet) same ("visual light" or photon) same (infrared or IFI)) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:35

S199	N	((dye with sensitized with "solar cell") or (photosensitizer with "solar cell")) and ((UV or ultra-violet) same ("visual light" or photon) same (infrared or IR)) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:36
S200	1	((dye with sensitized with "solar cell") or (photosensitizer with "solar cell")) same (infrared or IR) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:56
S201	1	((dye with sensitized with solar cell") or (photosensitizer with solar cell")) same (infrared or IR or infra-red) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:56
S202	9	((dye with sensitized with "solar cell") or (photosensitizer with "solar cell")) same2 (infrared or IR or infra-red) and @py<"2004"	US-PGPUB; USPAT	OR	ON	2011/05/05 08:57
\$203	143	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2") same ((electrolytic \$4 or electrochemical\$\$) near3 (treat\$4 or condition \$3 or process\$3 or intercalat\$3 or dop\$3)) and dye and @py<"2005"	US-PGPUB; USPAT	OR	ON	2011/05/05 10:41
\$204	320	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio sub.2") same ((electrolytic \$4 or electrochemical\$5) near3 (treat\$4 or condition \$3 or process\$3 or intercalat\$3 or dop\$3)) and dye	US-PGPUB; USPAT	OR	ON	2011/05/05 10:42

\$205	149	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub 2").clm. same ((electrolytic\$4 or electrochemical\$5) near3 (treat\$4 or condition\$3 or process\$3 or intercalat\$3 or dop\$3).clm.	US-PGPUB; USPAT	OR	ON	2011/05/05 10:42
\$206	5	("titanium dioxide" or "metal oxide" or "photoactive layer" or semicondutor or photosensitive or "tio. sub.2").clm. same ((electrolytic\$4 or electrochemical\$\$) near3 (treat\$4 or condition\$3 or process\$3 or intercalat\$3 or dop\$3)).clm. and (dye with ("solar cell" or photovoltaio)	US-PGPUB; USPAT	OR	ON	2011/05/05 10:43

## EAST Search History (Interference)

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S171	7875	((nano\$1particulate or nanoparticulate or nano- particulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer))	USPAT; UPAD	OR	ON	2011/05/03 11:48
S172	404	((nano\$1particulate or nanoparticulate or nano- particulate or "titanium dioxide" or "tio sub 2") near3 (electrode or layer)) and (intercalat\$3 or ((ion \$3 or metal or element) with (transfer\$3 or insert \$3) with surface))	USPAT; UPAD	OR	ON	2011/05/03 11:49
S173	46	((nano\$1particulate or nanoparticulate or nano- particulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)). clm. and (intercalats3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface))	USPAT; UPAD	OR	ON	2011/05/03 11:49

S174	12	((nano\$1particulate or nanoparticulate or nanoparticulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)). clm and (intercalat\$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)). clm	USPAT; UPAD	OR	ON	2011/05/03 11:49
S175	1	(((nano\$1particulate or nanoparticulate or nanoparticulate or "itanium dioxide" or "ito sub.2") near3 (electrode or layer)). clm. and (intercalat\$3 or ((ion\$5 or metal or element) with (transer\$3 or inser\$5) with surface)). clm. and ((solar or photovoltaic) with (device or cell or apparatus or system))	USPAT; UPAD	OR	ON	2011/05/03 11:50
S176	63	(((nano\$†particulate or nanoparticulate or nano- particulate or "titanium dioxide" or "tito.sub.2") near3 (electrode or layer)) and (intercalat\$3 or ((ion \$3 or metal or element) with (transfer\$3 or insert \$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system))	USPAT; UPAD	OR	ON	2011/05/03 11:51
S177	8	(((nano\$1particulate or nanoparticulate or nanoparticulate or nanoparticulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)) same (intercalat\$3 or ((ion \$\$5 \) or metal or element) with (transfer\$3 or insert \$\$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system))	USPAT; UPAD	OR OR	ON	2011/05/03 11:51

S178	117	[((nano\$1particulate or nanoparticulate or nano- particulate or "ittanium dioxide" or "tio.sub.2") near3 (electrode or layer)) same (intercalat\$3 or dop \$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system))	USPAT; UPAD	OR	ON	2011/05/03 11:53
S179	67	((nano\$1particulate or nanoparticulate or nanoparticulate or nanoparticulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)) same (intercalat\$3 or dop \$3 or (ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system)) and dye	USPAT; UPAD	OR .	OX	2011/05/03 11:54
\$180	77	(((nano\$1particulate or nanoparticulate or nanoparticulate or nanoparticulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)) same (intercalat\$3 or dop \$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)) and ((solar or photovoltaic) with (device or cell or apparatus or system)) and ((yor or "136".clas.)	USPAT; UPAD	OR .	ON	2011/05/03 11:54
S181	26	((nano\$1particulate or nanoparticulate or nano- particulate or "titanium dioxide" or "tio.sub.2") near3 (electrode or layer)) same (intercalat\$3 or dop \$3 or ((ion\$3 or metal or element) with (transfer\$3 or insert\$3) with surface)) same ((solar or photovoltaic) with (device or cell or apparatus or system)) and (dye or "136". (das.)	USPAT; UPAD	OR	ON	2011/05/03 11:55

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